

# PLAY TIC-TAC-TOE AMBIDEXTROUSLY

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THE GAME: Two players alternately chose one of the words ARTY, BRED, DOUX, EXIT, MAID, MOLT, RIOS, SLAB, SUEY until one of them wins by obtaining three words with a common letter. If neither player gets three of the same letter, the game is a draw.

ANALYSIS: The following grid illustrates the eight "lines" of common letters.

BRED	DOUX	MAID
SUEY	RIOS	SLAB
EXIT	MOLT	ARTY

Notice that the letters ASTERIOD are used exactly three times each and the remaining six letters BLMUXY of AMBIDEXTROUSLY are used exactly two times each. The expert player will exploit this observation.

The grid makes it obvious that this is a disguised version of ordinary tic-tac-toe with a bit of misdirection. Therefore the game, if played adroitly, should end in a draw but if First takes one of (M)AID, B(RED), E(X)IT = TIE, or ART(Y) and Second doesn't take RIOS, First can force a win. We leave the details to the reader.

Our word game is a new treatment of the late David L. Silverman's FISH SOUP which uses the words FISH, SOUP, SWAN, GIRL, HORN, ARMY, KNIT, VOTE and CHAT. (See #48 in *Your Move*, McGraw Hill, 1971.)

It in turn was adapted from Leo Moser's "The Game is Hot", using the words HOT, HEAR, TIED, FORM, WASP, BRIM, TANK, SHIP and WOES. (See Martin Gardner's chapter 16 in *Mathematical Carnival*, New York: Knopf, 1975.)